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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,545	06/19/2006	Stephen Thomson	0446-0180PUS1	1930

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EXAMINER

MCDONOUGH, JAMES E

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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03/09/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/550,545	Applicant(s) THOMSON, STEPHEN	
	Examiner JAMES E. MCDONOUGH	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/10/2008 and 9/26/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not understood how the apparatus of the instant invention will not cause at least some heating of the liquid, even if the heat gain can not be measured or perceived, it would be expected that at least some energy in the form of heat from friction would be delivered to the emulsion explosive, unless applicants have truly frictionless surfaces in the claimed apparatus.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9, and 11-13 are rejected under 35 U.S.C. 102(B) as being anticipated by GB 1 370 202, hereafter '202.

Regarding claims 1, 9, 11, and 13

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'202 teaches a method of transporting explosive slurries down boreholes wherein the end on the conduit tube is fitted with a turbine connected to a stirrer that is turned by the flow of slurry (page 1, lines 28-50), and as the flow of slurry is what powers the turbine the potential energy of the slurry will be dissipated and turbulence reduced at the outlet.

Regarding claims 2-4

'202 teaches the use of a conduit pipe with an internal diameter of 2-3 cm and a length of 100m or more (page 1, lines 11-21).

Regarding claim 5

Emulsion explosives and slurry explosives are synonymous.

Regarding claim 12

'202 teaches that the potential energy of the flow of the slurry is used to turn the turbine, this is a conversion of the potential energy of the liquid into the mechanical energy of the turbine.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6, 7, 10, and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over GB 1 370 202, hereafter '202, as applied to claims 1-5, 9, and 11 above.

Regarding claim 6

'202 does not explicitly teach that there is no change in the viscosity of the solution the method, apparatus, and explosive agent of the reference read directly on that of the instant invention and if the instant invention does not change the viscosity of the emulsion, then one of ordinary skill in the art would not expect that the viscosity of the emulsion of the reference will change absent evidence to the contrary. Further the design of the apparatus of the reference would not be expected to change the viscosity of the emulsion as there is no chopping motion involved. Further still the skilled artisan would appreciate that the viscosity of the emulsion will greatly effect the performance characteristics of an emulsion explosive, and will try to minimize to eliminate any change in viscosity.

Regarding claim 7

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The arguments relating to claim 6 are fully incorporated by reference here as the droplet size controls the viscosity of the emulsion, and the skilled artisan would readily appreciate this and take this into account, while delivering an emulsion explosive.

Regarding claim 10

Although, '202 does not explicitly teach that the means for dissipating potential energy does not cause heating of the liquid product, the reference teaches an apparatus that reads on the instant invention, and if this is not present in the instant invention, then one skilled in the art would not expect this to happen in the reference, absent any evidence to the contrary.

Regarding claim 14

'202 teaches that emulsion/slurry explosives are pumped through a conduit into a bore hole. Given its broadest reasonable interpretation the container that holds the explosive before entering the conduit is a "surface storage facility" and the borehole is an "underground storage facility", thereby anticipating the claims, on the other hand it would be obvious to use the apparatus, which is an improved apparatus for conveying explosive slurries, to move the explosive from wherever it is stored to wherever it is desired, absent any evidence to the contrary or unexpected results.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1 370 202, hereafter '202, as applied to claims 1-5 above.

Regarding claim 8

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Although, '202 is silent as to the viscosity of the emulsion explosive, the viscosity of the emulsion explosive is considered obvious, as it would have been determined through routine experimentation in the art, in an effort to optimize the performance characteristics of the emulsion explosive, by taking into account the desired sensitivity, impulse energy, ease of delivery/pumping, etc. for a given or desired use, absent any evidence of unexpected results or criticality.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. MCDONOUGH whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Marcheschi/
Primary Examiner, Art Unit 1793

JEM 2/22/2009